Chapter: 18

State(s): Idaho

Recovery Unit Name: Southwest Idaho

Region 1
U. S. Fish and Wildlife Service
Portland, Oregon

DISCLAIMER

Recovery plans delineate reasonable actions that are believed necessary to recover and/or protect the species. Recovery plans are prepared by the U.S. Fish and Wildlife Service and, in this case, with the assistance of recovery unit teams, State and Tribal agencies, and others. Objectives will be attained and any necessary funds made available subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities. Recovery plans do not necessarily represent the views or the official positions or indicate the approval of any individuals or agencies involved in the plan formulation, other than the U.S. Fish and Wildlife Service. Recovery plans represent the official position of the U.S. Fish and Wildlife Service *only* after they have been signed by the Director or Regional Director as *approved*. Approved recovery plans are subject to modification as dictated by new findings, changes in species status, and the completion of recovery tasks.

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Four problem assessments prepared under the Idaho Bull Trout Conservation Plan by the Southwest Basin Native Fish Watershed Advisory Group contributed to this chapter. The four problem assessments include the Boise River (Steed *et al*. 1998), the Deadwood, Middle Fork and South Fork Payette Rivers (Jimenez and Zaroban 1998), the Gold Fork and Squaw creek watersheds (Steed 1999), and Weiser River (DuPont and Kennedy 2000). The U.S. Fish and Wildlife Service acknowledges the technical groups for the Southwest Basin Native Fish Watershed Advisory Group and numerous individuals who participated in various meetings and discussions in developing the problem assessments, and who are acknowledged in each assessment.

SOUTHWEST IDAHO

EXECUTIVE SUMMARY

SPECIES CURRENT STATUS

The U.S. Fish and Wildlife Service issued a final rule listing the Columbia River population of bull trout as a threatened species on June 10, 1998 (63 FR 31647). The Southwest Idaho Recovery Unit forms part of the range of the Columbia River population. The Southwest Idaho Recovery Unit includes the Boise River, Payette River, and Weiser River basins. Although there were likely no historic barriers to bull trout moving among the three basins via the Snake River, today bull trout occupy areas in the basins upstream unsuitable habitat and dams. The basins were included in a single recovery unit because they likely functioned as a unit historically, and they collectively encompass nine key watersheds identified in the Idaho Bull Trout Conservation Plan (Batt 1996). All nine key watersheds are administratively addressed by a single watershed advisory group, the Southwest Idaho Native Fish Advisory Group. However, each river basin is treated as a recovery subunit (Boise, Payette and Weiser subunits) for organization of this recovery unit chapter and because they are now functionally isolated from each other.

In the Boise River Recovery Subunit, bull trout are distributed in three core areas, all upstream of Lucky Peak Dam. The Arrowrock Core Area includes the Boise River watersheds upstream of Arrowrock Dam, including the North Fork Boise River, Middle Fork Boise River, and South Fork Boise River downstream of Anderson Ranch Dam. The Anderson Ranch Core Area includes the South Fork Boise River watershed upstream of Anderson Ranch Dam. The Lucky Peak Core Area includes Lucky Peak Reservoir and tributaries entering it, namely the Mores Creek watershed. Migratory and resident bull trout occur in both the Arrowrock and Anderson Ranch core areas. In the Lucky Peak Core Area, resident bull trout occur in the headwaters of Mores Creek and migratory bull trout occur in Lucky Peak Reservoir. It is not known whether all migratory bull trout in Lucky Peak Reservoir have been entrained from the Arrowrock Core Area, or that some fish may be produced in the Mores Creek watershed. A total of 31 local populations currently exist in the Boise River Recovery Subunit.

In the Payette River Recovery Subunit, bull trout are distributed in five core areas throughout the basin: (1) the North Fork Payette River Core Area includes the watershed upstream of Cascade Dam; (2) the Middle Fork Payette River Core Area includes the watersheds upstream from the confluence with the South Fork Payette River; (3) the upper South Fork Payette River Core Area includes watersheds upstream of Big Falls, including the Deadwood River drainage downstream of Deadwood Dam; (4) the Deadwood River Core Area

includes watersheds in the Deadwood River drainage upstream of Deadwood Dam; and (5) the Squaw Creek Core Area includes watersheds in Squaw Creek upstream from its confluence with the Payette River. Bull trout in these core areas are primarily resident fish, with relatively low numbers of migratory fish existing in some areas (*e.g.,* Middle Fork Payette River, South Fork Payette River, and Deadwood Reservoir). A total of 18 local populations currently exist in the Payette River Recovery Subunit.

The Weiser River Recovery Subunit consists of a single core area, which includes watersheds upstream of and including the Little Weiser River. Bull trout in the Weiser River Core Area are thought to consist only of resident fish. A total of five local populations currently exist in the Weiser River Recovery Subunit.

HABITAT REQUIREMENTS AND LIMITING FACTORS

A detailed discussion of bull trout biology and habitat requirements is provided in Chapter 1 of this recovery plan. The limiting factors discussed here are specific to the Willamette Recovery Unit Chapter. Habitat fragmentation and degradation are likely the most limiting factors for bull trout throughout the Southwest Idaho Recovery Unit. Although reservoirs formed by dams in some basins have allowed bull trout to express adfluvial life histories, dams, irrigation diversions, and road crossings have formed impassable barriers to fish movement within the basins, further fragmenting habitats and isolating bull trout. Land management activities that degrade aquatic and riparian habitats by altering stream flows and riparian vegetation, such as water diversions, past and current mining operations, timber harvest and road construction, and improper grazing practices, have negatively affected bull trout in several areas of the recovery unit. Bull trout are also subject to negative interactions with nonnative brook trout in some streams.

RECOVERY GOALS AND OBJECTIVES

The goal of the bull trout recovery plan is to **ensure the long-term persistence of self-sustaining, complex, interacting groups of bull trout distributed throughout the species' native range, so that the species can be delisted.** To achieve this goal the following objectives have been identified for bull trout in the Southwestern Idaho Recovery Unit:

- Maintain current distribution of bull trout and restore distribution in previously occupied areas within the Southwest Idaho Recovery Unit.

- Maintain stable or increasing trends in abundance of bull trout.

- Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.

- Conserve genetic diversity and provide opportunity for genetic exchange.

RECOVERY CRITERIA

Recovery criteria for the Southwestern Idaho Recovery Unit are established to assess whether actions are resulting in the recovery of bull trout in the basin. The criteria developed for bull trout recovery address quantitative measurements of bull trout distribution and population characteristics on a recovery unit basis.

1. **Maintain current distribution of bull trout in the 54 local populations identified, and expand distribution by establishing bull trout local populations in areas identified as potential spawning and rearing habitat**. The number of existing local populations by recovery subunit and core area are: Boise River Recovery Subunit, 31 existing local populations; Payette River Recovery Subunit, 18 existing local populations; and 5 in Weiser River Recovery Subunit. Achieving criterion 1 entails maintaining existing local populations and encouraging the establishment of additional bull trout local populations in potential spawning and rearing habitat in all core areas of the recovery unit. Establishing at least one new local population each in the Lucky Peak, Middle Fork Payette River, North Fork Payette River, Squaw Creek, and Weiser River core areas is necessary to achieve criterion 1, if evaluations indicate that it is feasible in a specific core area.

2. **Estimated abundance of adult bull trout is at least 17,600 individuals in the Southwest Idaho Recovery Unit**. The recovered abundance of adult bull trout for the recovery unit was estimated based on professional judgement of the recovery unit team in consideration of surveyed fish densities, habitats, and potential fish production after threats have been addressed. The recovered abundance of adult bull trout by recovery subunit and core area are: Boise River Recovery Subunit, at least 10,100 bull trout; Payette River Recovery Subunit, at least 7,000 bull trout; and at least 500 in Weiser River Recovery Subunit.

3. **Adult bull trout exhibit stable or increasing trends in abundance in the Southwest Idaho Recovery Unit**.

4. **Specific barriers to bull trout migration in the Southwest Idaho Recovery Unit have been addressed**. Many barriers to bull trout migration exist within the recovery unit, and this recovery plan

recommends several tasks to identify, assess, and reduce barriers to bull trout passage. Although achieving criteria 1 through 3 is expected to depend on providing passage at barriers (including barriers due to physical obstructions, unsuitable habitat, and water quality) throughout all core areas in the recovery unit, the intent of criterion 4 is to note specific barriers to address or tasks that must be performed to achieve recovery (*i.e.,* evaluated and appropriately addressed if found to be feasible). Activities necessary to fulfill this criterion for each recovery subunit include: continuing to provide passage (*e.g.,* using the existing trap-and-haul program) of bull trout at Arrowrock Dam (task 1.4.2) and identifying, assessing, and remedying potential passage barriers in the Lucky Peak Core Area (task 1.2.4) in the Boise River Recovery Subunit; addressing passage at the Gold Fork River irrigation diversion (task 1.2.3) and identifying, assessing, and remedying potential passage barriers in the Squaw Creek and North Fork Payette River Core Areas (tasks 1.2.2, 1.2.3, and 1.2.4) in the Payette River Recovery Subunit; and identifying, assessing, and remedying potential passage barriers in the Weiser River core area (tasks 1.2.1 and 1.2.2). Tasks intended to assess the feasibility of providing passage should be conducted with coordinated review during implementation with the U.S. Fish and Wildlife Service.

ACTIONS NEEDED

Recovery for bull trout in the Southwest Idaho Recovery Unit will entail reducing threats to the long-term persistence of populations and their habitats, ensuring the security of multiple interacting groups of bull trout, and providing access to habitat conditions that allows for the expression of various life-history forms. Seven categories of actions needed are discussed in Chapter 1; tasks specific to this recovery unit are provided in this chapter.

ESTIMATED COST OF RECOVERY

The estimated cost of bull trout recovery in the Southwest Idaho Recovery Unit is $7 million spread over a 25-year period. This estimate does not include costs associated with some activities (*e.g.*, capital improvements for fish passage and protection) for which the feasibility and design options are the outcomes of recommended tasks in this chapter, nor does this estimate include costs for tasks that are normal agency responsibilities under existing authorities. Total costs include estimates of expenditures by local, Tribal, State, and Federal governments and by private business and individuals. Successful recovery of bull trout in the Southwest Idaho River Recovery Unit is contingent on removing barriers, improving habitat conditions, providing fish passage, and removal of nonnative species. These costs are attributed to bull trout conservation, but other aquatic species will also benefit.

ESTIMATED DATE OF RECOVERY

Time required to achieve recovery depends on bull trout status, factors affecting bull trout, implementation and effectiveness of recovery tasks, and responses to recovery tasks. A tremendous amount of work will be required to restore impaired habitat, reconnect habitat, and eliminate threats from nonnative species. Three to five bull trout generations (15 to 25 years), or possibly longer, may be necessary before identified threats to the species can be significantly reduced and bull trout can be considered eligible for delisting.